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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/558,954	04/26/2000	Tetsu Sugaya	FUJI-17.289	3014

7590 09/10/2003  
Katten, Muchin, Zavis & Rosenman  
575 Madison Ave.  
New York, NY 10022-2585

EXAMINER

PHILPOTT, JUSTIN M

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/558,954

Applicant(s)

SUGAYA ET AL.

Examiner

Justin M Philpott

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 November 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 April 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

2. The information disclosure statement filed September 27, 2001 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. Specifically, a concise explanation of relevance in the English language has not been provided for the reference identified as "A29" in Paper No. 3. It has been placed in the application file, but the information referred to therein has not been considered.

### ***Drawings***

3. Figures 1-6 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, claim 1 recites the limitations “the number of links” (page 43, lines 20-21) and “the amount of the transmission information” (page 43, lines 21-22). There is insufficient antecedent basis for this limitation in the claim. Applicant may overcome this rejection by amending the claim to instead recite “a number of links” and “an amount of the transmission information”.

Claims 2-5 are rejected for being dependent upon a rejected base claim. Applicant may overcome this rejection by amending claim 1 as suggested above.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 2, 6, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art disclosed in the instant application (Figs. 1-6 and page 1, line 4 – page 8, line 19) in view of U.S. Patent No. 6,501,736 to Smolik et al.

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Regarding claims 1, 6 and 14, the prior art disclosed in the instant application teaches a wireless terminal device (e.g., 134 in Fig. 1) comprising: a wireless interface part (e.g., 141) having an interface with a wireless transmission path at a physical layer (e.g., L1 at 134 in Fig. 6); a link forming part (e.g., 142) accessing the wireless transmission path via the wireless interface unit (e.g., 141) and forming a particular link on the wireless transmission path (e.g., see operations of 142 in FIG. 2); and a transmission/reception part (e.g., 140) transmitting and/or receiving transmission information via the particular link formed by the link forming part, the link forming part forming the particular link on the wireless transmission path when initiated (e.g., see page 1, line 4 – page 8, line 19).

However, the prior art disclosed in the instant application may not specifically require the wireless transmission path to be formed as a physical channel to which a CSMA system is applied, the CSMA system securing a given transmission quality with respect to a total of the number of links concurrently formable and the amount of the transmission information.

Smolik also teaches a wireless terminal device (e.g., at 201 in FIG. 2) communicating with a wireless communication system (e.g., at 202). Smolik further teaches the wireless communication system secures a given transmission quality (e.g., corresponding to transmission rate) with respect to a total number of the links currently formable and the amount of the transmission information (e.g., call carrying capacity, see col. 1, line 56 – col. 2, line 7). The teachings of Smolik provide increased capacity and accommodate varying conditions of traffic demands and desired quality of service (e.g., see col. 2, lines 31-38). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the teachings of

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Smolik to the prior art disclosed in the instant application in order to provide increased capacity and accommodate varying conditions of traffic demands and desired quality of service.

However, the prior art disclosed in the instant application in view of Smolik may not specifically require the wireless communication system to be a CSMA system. However, the prior art of the instant application teaches that the wireless terminal device is a wireless LAN device attached to a PCMCIA slot of a personal computer (e.g., see col. 3, lines 13-16) and carrier sense multiple access (CSMA) is a well known standard method of communication for wireless LAN devices. Furthermore, it is well known in the art that applying a well known standard to a system provides the system with significantly improved industrial applicability. Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to utilize the CSMA standard in the system of the prior art disclosed in the instant application in view of Smolik, since it is well known in the art that applying a well known standard to a system provides the system with significantly improved industrial applicability.

Regarding claim 2, the prior art disclosed in the instant application teaches the link forming part (e.g., 142) captures resources of an upper layer including a data link layer (e.g., IP layer at 134 in FIG. 6) in accordance with the physical layer (e.g., L2, L1) of the wireless transmission path at the time of forming the particular link.

8. Claims 3-5 and 7-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art disclosed in the instant application in view of Smolik, further in view of U.S. Patent No. 6,442,151 to H'mimy et al.

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Regarding claims 3, 7, 8 and 10, the prior art disclosed in the instant application in view of Smolik teach the device discussed above regarding claims 1, 6 and 14, and further, Smolik teaches a monitoring part for monitoring, for each link, the amount of the transmission information handled (e.g., transmitted/received in downlink/uplink) by the transmission/reception part (e.g., monitoring total power corresponding to the amount of transmission information, see col. 7, line 23 – col. 11, line 18), the link forming part changing, as to the particular link formed in advance, a transmission capacity (e.g., call capacity) to a value which ensures a predetermined transmission quality in accordance with the amount of the transmission information (e.g., see FIG. 4 and col. 9, line 27 – col. 10, line 36). As discussed above, the teachings of Smolik provide increased capacity and accommodate varying conditions of traffic demands and desired quality of service (e.g., see col. 2, lines 31-38). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the teachings of Smolik to the wireless terminal device of the prior art disclosed in the instant application in order to provide increased capacity and accommodate varying conditions of traffic demands and desired quality of service.

However, the prior art disclosed in the instant application in view of Smolik may not specifically disclose alternatively substituting another link having another transmission capacity greater than that of the particular link.

H'mimy also teaches a wireless terminal device (e.g., 12 in FIG. 4) communicating with a wireless communication system (e.g., 14). H'mimy further teaches substituting another link having another transmission capacity greater than that of a first particular link (e.g., see col. 3, lines 23-34). The teachings of H'mimy provide improved uniformity of channel quality

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distribution in a system resulting in overall increased transmission quality and capacity (e.g., see col. 3, lines 57-62). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the teachings of H'mimy to the device of the prior art disclosed in the instant application in view of Smolik in order to improve uniformity of channel quality distribution and provide overall increased transmission quality and capacity.

Regarding claims 4 and 9, the prior art disclosed in the instant application in view of Smolik in view of H'mimy teach the device as discussed above regarding claims 3, 7, 8 and 10, and Smolik teaches transmission quality adjustments may be implemented via a man-machine interface input (e.g., see col. 10, lines 39-46 wherein setting thresholds may be performed manually).

Regarding claims 5 and 11, the prior art disclosed in the instant application in view of Smolik in view of H'mimy teach the device as discussed above regarding claims 3, 7, 8 and 10, and Smolik teaches the monitoring monitors a frequency of occurrence of a collision in the physical channel in CDMA (e.g., see col. 9, lines 19-30 regarding reaching a predetermined level of calls being blocked).

Regarding claim 12, the prior art disclosed in the instant application in view of Smolik in view of H'mimy teach the device as discussed above regarding claims 3, 7, 8 and 10, and H'mimy further teaches a memory part (e.g., database, see col. 10, line 38 – col. 11, line 3) which stores an amount of information assigned to a port number (e.g., corresponding to one of a plurality of channels), and a port number monitoring part (e.g., see col. 10, line 45 regarding monitoring) adding to the transmission information transmitted or received, wherein the link forming part changes based on the amount of transmission information stored in the memory part



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and related to the port number acquired by the port number monitoring port, and a transmission capacity of one of the individual links is formed in advance (e.g., see col. 10, lines 55-62 regarding preassignment algorithm) to a value which insures a predetermined transmission quality. As discussed above, the teachings of H'mimy provide improved uniformity of channel quality distribution in a system resulting in overall increased transmission quality and capacity (e.g., see col. 3, lines 57-62). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the teachings of H'mimy to the device of the prior art disclosed in the instant application in view of Smolik in order to improve uniformity of channel quality distribution and provide overall increased transmission quality and capacity.

Regarding claim 13, the prior art disclosed in the instant application in view of Smolik in view of H'mimy teach the device as discussed above regarding claims 3, 7, 8 and 10, and Smolik teaches transferring control information necessary for changing a transmission capacity (e.g., see col. 5, line 60 – col. 8, line 18 regarding the Service Option Control Order comprising the ORDQ field).

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,542,742 to Schramm et al. discloses a method of link selection for providing a desired quality of service for wireless communications.

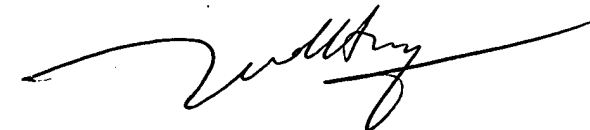
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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin M Philpott whose telephone number is 703.305.7357. The examiner can normally be reached on M-F, 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on 703.308.6602. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.305.4750.

Justin M Philpott



HUY D. VU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600